CALIFORNIA RESOURCES AGENCY
COASTAL IMPACT ASSISTANCE PROGRAM
PROJECT PROPOSAL FORM

Department: Department of Fish and Game
Prepared by: Patricia Wolf, Regional Manager
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Title of project: Constituent Involvement for Marine Management
Project location: Los Alamitos
Total cost: $75,000
Funding request: $75,000

MISSION

To ensure comprehensive and coordinated management, conservation and enhancement of California's ocean and coastal resources for their intrinsic value and for the benefit of current and future generations.

GOALS: Four goals have been established by the State of California to achieve this mission.

Goal 1: Stewardship. To assess, conserve, and manage California's ocean and coastal resources and the ecosystem that supports those resources.

Goal 2: Economic Sustainability. To encourage environmentally sound, sustainable, and economically beneficial ocean and coastal resource development activities.

Goal 3: Research, Education and Technology. To advance research, educational programs, and technology developments to meet future needs and uses of coastal and ocean resources.

Goal 4: Jurisdiction and Ownership. To maximize California's interests in coastal watersheds, State Tidelands, the Territorial Sea, and the Exclusive Economic Zone.

Project Summary:

Purpose

The purpose of this project is to enable the Department to meet the requirements of the Marine Life Management Act (MLMA) by facilitating broad and effective involvement of constituents in fisheries management decisions. The Department requires training and manuals for staff to develop the understanding and skills necessary for longterm effective constituent involvement and requires professional facilitation of constituent involvement activities.

Background and Problem Statement

The MLMA shifted the focus of decision-making about California's living marine resources from the Legislature to the Department and Fish and Game Commission. To ensure that commercial and recreational fishermen, conservationists, processors, scientists, and the interested public are part of the decision-making process, the MLMA mandates an active effort to involve those interests most concerned with the health of marine resources in the development and implementation of new management measures. Generally, the MLMA calls for involving "all interested parties" in making decisions [Fish and Game Code, Section 7050 (b)(7)] and disseminating accurate information on marine life and its management [FGC Section 7050 (b)(8)], emphasizes ongoing communication among the Department, the Commission, and interested parties [FGC Section 7059 (a)(1)]; encourages the State to seek the help of specialists in science and other issues [FGC Section 7059(a)(2); and recommends meetings in areas most affected by decisions [FGC Section (7059(a)(4)]. The MLMA also directs the Department and Commission to seek to improve communication, collaboration and dispute resolution activities (FGC Section (7059(b)(1)].

The Department has traditionally focused on biological issues and analyses, and generally has little experience with constituent involvement processes. In addition, the Department has historically focused on individual species and fisheries, and has not used an ecosystem approach to marine resources management. In addition, effective constituent involvement is a critical element in the development of fishery management plans, which are the primary tool for managing California's marine resources, and in the use of an ecosystem approach for managing resources. This is a major shift in how the Department develops fishery management measures, and in how the Department manages resources in general. Department staff require training in the fundamentals of constituent involvement, including techniques for public participation, facilitation and communication; dispute and conflict management and resolution; development and coordination of advisory groups; and effective public meetings. In addition to training, the Department needs to develop standard procedures that can be referenced and used during various constituent involvement activities and processes to ensure that constituent involvement becomes a standard element in the resources management process.

Project Description

This funding will enable the Department to contract with specialists to 1) train Department staff in public involvement and participation; and 2) develop and implement procedures for public involvement, including a manual for constituent involvement.

Training will be accomplished through general training sessions, advanced training for lead Department staff, and consultation during actual constituent involvement activities and programs during the development of fishery management plans and the implementation of the Marine Life Management Act. This will also provide specialist expertise for the development of priority fishery management plans as mandated by the Act.

A guide or manual for constituent involvement will be developed by Department staff with guidance from the consultant that references relevant policies; identifies roles and responsibilities; identifies and explains various procedures, including receiving and responding to public input; provides examples of letters, notices, newsletters, agendas, meeting groundrules and procedures, and advisory group structure and operating principles; specifies procedures for public meetings; and addresses other elements of public participation.

Consistency with Mission and Goals:

Mission: Input from constituents results in a broad array of perspectives and issues that improve comprehensive and coordinated management. Effective involvement of representative constituent interests is a critical first step toward building consensus-based solutions for management of California's marine resources and fisheries.

Goal 1: Stewardship. Input from a broad array of stakeholders also helps the Department use an ecosystem approach to resource stewardship. Constituent involvement helps expand the management process beyond a particular fishery or an individual species to include ecosystem considerations such as forage requirements by other animals, habitat protection, and multi-species interactions.

Goal 2: Economic Sustainability: Constituent involvement helps ensure that economically beneficial activities are fully considered in the management process and addressed in an environmentally sound manner by including resources users and affected parties.

Goal 3: Research, Education and Technology: Constituent involvement includes participation of the scientific and academic communities in the management process, and assists with cooperation between the Department and other agencies and academic institutions to identify research needs and propose collaborative solutions. Effective constituent involvement also requires public outreach and education to share information, and develop management options and management decisions in a transparent manner. Technologies such as internet access, webpage communications, and video conferencing will be explored and can help meet future needs in resource management.

Timeline:

Fall 2001 Develop contract proposals and specifications for training and consultation on constituent involvement and for guidance on development of a manual on constituent involvement methods and procedures

Jan-Feb 2002	Develop statement of work, budget, and deliverables; issue contract.
Mar-May 2002	Contractor advises on development of manual on constituent involvement methods and procedures.
Mar 2002 - May 2003	Contractor develops and implements training program and provides consultation for ongoing constituent involvement programs.
June 2003	Contractor produces final report on training program.

Cost Estimate and Budget:

Contract for Constituent Involvement Training and Consultation	$75,000
TOTAL	**$75,000**

CALIFORNIA RESOURCES AGENCY
COASTAL IMPACT ASSISTANCE PROGRAM
PROJECT PROPOSAL FORM

Department: Department of Parks and Recreation
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Title of project Crystal Cove Underwater Preserve Monitoring for Impacts
Project location: Orange County - Crystal Cove State Park, Laguna Beach
Total cost: $35,000
Funding request: $35,000

MISSION

To ensure comprehensive and coordinated management, conservation and enhancement of California's ocean and coastal resources for their intrinsic value and for the benefit of current and future generations.

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Goal 3: Research, Education and Technology. To advance research, educational programs, and technology developments to meet future needs and uses of coastal and ocean resources.

Goal 4: Jurisdiction and Ownership. To maximize California's interests in coastal watersheds, State Tidelands, the Territorial Sea, and the Exclusive Economic Zone.

Project Summary:

The Irvine Coast Underwater Preserve is located within Crystal Cove State Park which lies about 1 mile southeast of Newport Harbor with it's thousands of boats. The park is one of the first rocky reef areas near the harbor and thus receives innumerable visits by recreational and commercial vessels, and their resultant impacts from anchor drops, fishing, diving, etc.

This monitoring effort will follow sampling protocols established by Dr. Valencic in the 1986 Crystal Cove State Park Underwater Research Project. Under contract, Dr. Valencic conducted both cold and warm season samples of established transect lines on 4 underwater reef areas within the Underwater Preserve. He used line transects, quadrat counts, and narrated underwater video to quantify the abundance of invertebrates and fish using methodology and indicator species as the National Parks Service had used in the Channel Island System. His final report made comments on overall ecosystem health, fish abundance, man-induced impacts, and recommendations for future management of the Preserve. His data were compared to W.E. Pequegnat's data from 1963, and inferences on abundance, diversity, and system-wide health were made.

This project will use the same four reefs, their same transect lines (still in place today), and fish count methodology to generate a similar data set that can then be compared to that established in 1986. At least two years of both cold and warm water data will be collected. Additionally, specific observations on the impacts made by recreational scuba and skin divers, recreational and commercial fishing, the lobster fishery, anchor drop impacts, debris and trash including lobster traps and line will be quantified. Nearshore reef impacts potentially produced by the increases of urban runoff and an increased sediment load will be made. Analysis of species composition and abundance, kelp distribution, unusual species accounts, and urchin barrens will also be made. Contract data collection will be aided by the Department's Dive Team.

The change in data sets will be used to make recommendations to the Department for continuance, denial, or modification of the above activities. The Department can then make recommendations to the Fish and Game Commission for the exclusion of certain activities as needed for better management of the subtidal ecosystem. Recommendations can also be made to the Marine Managed Areas steering committee for a potential upgrade in the status of this Underwater Preserve.

No on-going subtidal or nearshore survey work is currently being conducted by the Department of Fish and Game (Dave Parker). The Regional Water Quality Control Board has been examining bacterial levels and runoff into this Underwater Preserve and ASBS, has delivered Cease and Desist Orders to nearby landowners, but is not conducting research per se in the subtidal area. The Irvine Company has contracted Dr. Ford of UCSD to examine epibiotic abundance in the nearshore benthos at the mouths of Los Trancos, Muddy and Emerald Canyons. In coordination with the Orange County Coastkeepers, STD Industries is transplanting giant kelp sporophytes at the 30' profile offshore of Crystal Cove and Corona del Mar.

Consistency with Mission and Goals:

This continuing research project will use previously collected data to assess ecosystem changes over time. With similarly-collected data sets, management decisions can be made to

better manage and conserve the valuable resources designated as an Underwater Preserve and Area of Special Biological Significance. Analysis of the change of data will be passed on to both agency interests as well as folded into the local interpretive efforts provided by the park at Crystal Cove. This project is closely aligned with the CIAP Mission statement as well as Goals 1 and 3.

Budget and Cost Estimate:

Although this project has a requested amount of $35,000, the Department will use existing State Parks Dive Team and their equipment: photography and video, underwater communications, underwater scooters, rescue boats, tanks and dive materials, as well as their trained employees to assist the contractor in collecting the necessary data. Use of this team and associated dive equipment for the number of dives necessary to collect data for two seasons in each of two years is estimated at $24,000. Spending will include the following:

· Dive equipment	$8,000
· Underwater video	4,000
· Transect tapes, stakes, line, quadrants	400
· Software	550
· Computer equipment	2,000
· Field equipment	1,500
· Travel	500
· Salary and wage for collection, analysis, report	18,050
TOTAL	**$35,000**

Timeline for Project:

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
YR1		Reestablish Reef Transects							Sample Transects			Data-
YR2	Analysis		Sample Transects			Data Analysis			Sample Transects			Data-
YR3	Analysis		Sample Transects			Data Analysis/Final Report						

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Department: Department of Fish and Game
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Title of project: Fisheries Monitoring Infrastructure
Project location: Los Alamitos
Total cost: $300,000
Funding request: $355,000

MISSION

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Goal 4: Jurisdiction and Ownership. To maximize California's interests in coastal watersheds, State Tidelands, the Territorial Sea, and the Exclusive Economic Zone.

Project Summary:

Purpose

The purpose of this project is twofold. First, this project will evaluate the current method of collecting commercial fisheries landing data in California; review systems used by other state, federal, and Canadian fisheries agencies; and develop a new system for California commercial fisheries. This project would include a feasibility study that would satisfy State requirements for major modifications to data processing systems. Second, this project will evaluate and develop a system of monitoring recreational catches in the private (non-charter) recreational fishery segment in a comprehensive, timely and accurate manner.

Background and Problem Statement

Data on commercial landings of fish and shellfish are a major, and sometimes the only, source of information on trends in fisheries and marine life populations. It is the primary information source the Department relies on to manage many fisheries.

The usefulness of the data currently being recorded is undermined by an antiquated data collection system. The existing system was developed when fisheries were typically located in specific ports, were relatively large volume and involved single species. Today California has several important fisheries that are widespread and often not associated with a particular port, that are smaller volume, and include multiple species. For example, in some fisheries, such as the nearshore fishery, landings are not made at established sites and are therefore difficult to track and to sample. In many cases, such as rockfish, the current system often does not record species specific information, which limits its usefulness for management. The current system is also based on geographic areas that are large and lack the detail and resolution needed for many management decisions. This results in a high degree of uncertainty about the accuracy of the data, which results in a loss of public confidence in the Department's ability to manage fisheries for sustainability. Data are not readily available to the public; with increased constituent involvement, there is a heightened interest in the information that is used to make management decisions.

Accurate and timely data on recreational fisheries is also critical for effective management. The decline of several key fisheries has intensified commercial and recreational fishing for many species in California, and the need for reliable and timely information to track and control catches has increased as a result. The current system relies on a federal program that is seriously deficient in providing reliable, timely and accurate data, especially for the non-charter boat sectors of the recreational fishery. As in the commercial fishery, the uncertainty about the accuracy of the data results in a loss of public confidence in the state's ability to manage its fisheries. Also, the Department and Commission have had to impose greater restrictions than otherwise might be necessary because this uncertainty results in a more cautious approach to management. This funding is aimed at developing a system to improve recreational catch reporting, just as proposed for reporting of commercial catches. It is focused on the private (non-charter) segment of the fishery because this is the segment that is most poorly monitored by existing federal programs, particularly in southern California which has a large private boat fleet. In addition, the Department has experience in monitoring charter boat fisheries and is in the process of evaluating how to augment federal sampling of the charter boat fishery segment.

Project Description:

Part 1, Commercial Fisheries Data ($230,000): Use a contract to collect the necessary background information on California's existing data collection program, including problems, issues, limitations, and needs. Conduct a review of programs for monitoring commercial landings information operated by other states, federal agencies, and Canada to identify options, pros and cons of other programs, and elements that could be adapted to California's commercial monitoring infrastructure. Evaluate alternative and improved technology for capturing and processing data, and options for storing and retrieving information. Make recommendations for changes to California's commercial fisheries data collection program.

Part 2: Recreational Fisheries Data ($70,000): Use a contract to collect the necessary information on California's existing sampling and data collection program (primarily the existing federal program) for private (non-charter) recreational fisheries, including problems, issues, limitations, and needs. Conduct a review of programs for monitoring recreational catches that are operated by other states and federal agencies, and Canada, to identify alternatives, options, pros and cons of other programs, and elements that could be adapted to California's recreational fisheries monitoring program. Evaluate alternative and improved technology for capturing and processing data, including sampling design requirements for sampling the private (non-charter) recreational catch. Make recommendations for augmenting or replacing the current recreational fisheries sampling programs.

Consistency with Mission and Goals:

Mission: This project enhances the information available for management decisions by improving fisheries monitoring and data collection. This results in more comprehensive, coordinated and timely management and improves our ability to conserve marine resources and manage fisheries in a sustainable manner.

Goal 1: Stewardship. Accurate and timely information is critical for assessing, conserving and managing ocean resources. These fishery monitoring projects will update and enhance the fisheries related information that is necessary for effective management. It addresses both commercial and recreational fisheries information.

Goal 2: Economic Sustainability: Improving the data available from commercial and recreational fisheries will enhance the state's ability to manage those activities so they are sustainable and economically viable. Recreational and commercial fisheries represent major economic opportunities and constitute a major contribution to California's economy.

Goal 3: Research, Education and Technology. Updating the data collection system for the commercial fisheries and improving monitoring capabilities for recreational fisheries will require the use of current technologies and will help address future resource needs. More accurate data from California's fisheries will improve our ability to provide educational about these important activities.

Timeline:

Fall 2001	Develop contract proposals specifications for commercial and recreational data systems evaluation and recommendations. Contact academic, government agencies concerning ability to implement project. Ensure that Feasibility Study Report requirements are met. If bid process is required, contract proposal process will require 60 additional days.
Jan 2002	Develop statement of work, budget, and deliverables; issue contract
Feb-Mar 2002	Contractor(s) collect information on state, federal, other state agencies and Canada to identify alternatives, options, pros and cons of other programs, and elements to adapt to this system
Jun-Jul 2002	Contractor(s) evaluate alternative and improved technology for capturing and processing data, including sampling design, and make recommendations for modifying existing fisheries data sampling and processing programs.
Aug 2002	Contractor to produce final report and present findings to Department. Project should be completed in time to address recommendations in the 2003-2004 budget cycle.

Cost Estimate and Budget:

Contract for Commercial Fisheries Data	$230,000
Contract for Recreational Fisheries Data	70,000
TOTAL	**$300,000**

Non CIAP Funds:

DFG contract management, scientific and system analysis support, based on 6 months staff time	$55,000

CALIFORNIA RESOURCES AGENCY
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PROJECT PROPOSAL FORM

Department: Department of Fish and Game
Prepared by: Richard Klingbeil, Program Manager
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Title of project: Infrastructure of a Marine Life Management Act Nearshore Ecosystem Assessment Program (NEAP)
Project location: Monterey
Total cost: $700,000
Funding request: $700,000

MISSION

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Goal 4: Jurisdiction and Ownership. To maximize California's interests in coastal watersheds, State Tidelands, the Territorial Sea, and the Exclusive Economic Zone.

Project Summary:

This project would provide basic infrastructure and baseline information for initiating the Marine Life Management Act Nearshore Ecosystem Assessment Program (NEAP) operated by the Marine Region of the Department of Fish and Game. This approach to nearshore monitoring is an outgrowth of the success of pioneering pilot studies conducted by Marine Region staff over the past decade. The program would be the core of the Marine Region's nearshore ecosystem management science and would accomplish several important objectives:

- Be a major step toward the ecosystem approach to monitoring and integrated management of the nearshore resources as mandated by the Marine Life Management Act (FGC sections 7050(b)(1) and 99.5).
- Provide coastwide monitoring of the health of nearshore marine life resources, beginning with rocky reef and kelp habitat communities. The NEAP would map and monitor habitat condition as well as ecologically and economically important fish and invertebrate species.
- Provide the information necessary to evaluate the effectiveness of nearshore marine life and fisheries management.
- Provide the information necessary to adapt management to changing conditions.
- Be a practical and cost-effective approach to providing the information needed to manage an extremely complex marine environment.
- Provide the ideal means for collaborations between the Marine Region and such important non-agency nearshore ecosystem projects as PISCO (University of California, Santa Barbara; University of California, Santa Cruz; Stanford University and Oregon State University).

Components of the Nearshore Ecosystem Assessment Program

1) Reference Marine Protected Areas (MPA) The program will identify 4-6 existing, fully protected marine areas. SCUBA and remotely operated vehicle (ROV) surveys of ecologically and economically important rocky reef and kelp habitat species in these small, no-take areas would provide baseline information on the health of the nearshore environment and naturally occurring changes in that environment. Information from each reference MPA site will provide comparisons with other areas in the same general region of the coast where commercial and recreational use is not prohibited.

2) Survey areas outside each Reference Site Systematic surveys outside each reference MPA site will provide comparisons with the unfished sites. Comparative indices of fish and invertebrate abundance, as well as other key ecosystem features, would provide the basis for evaluating effects of fishing and for adapting management to changing conditions.

3) Program Staff Each set of study sites would have dedicated staff for science, interpretive, volunteer and outreach programs. Staffing will be accomplished through a combination of utilizing existing positions, volunteers and contracts with University of California and California State University marine academic programs. Marine Region biologists, in collaboration with biologists from several marine science institutions, will conduct the various surveys of site sets using SCUBA and ROV equipment. Program staff will also be responsible for coordination and

coastwide data management and analysis. At some sites, volunteer-based docent programs will be a valuable tool for public education and Marine Region outreach.

Enforcement is critical in such a system, since poaching can easily reduce the reliability of data from MPA sites. Existing enforcement staff will be redirected to provide enforcement for these MPA sites. In addition, wherever possible, collaborative enforcement efforts will be developed with other agencies, including National Park Service and Department of Parks and Recreation.

4) Site Volunteer Programs The Marine Region will establish a volunteer coordination program to recruit and organize training for science and interpretive volunteers, working with fishermen, sport divers, and others.

5) Partnerships/Collaboration: Various researchers from the University of California; California State University/Moss Landing Marine Labs; Stanford University; Oregon State University; Boston University and the National Marine Fisheries Service are engaged in and/or planning nearshore ecosystem research that can be linked to this program. Recent discussions among various researchers has elicited significant interest in the Nearshore Ecosystem Assessment Program. Collaborative efforts will likely be an important outgrowth of this project and have the potential to greatly expand the scope of this program.

NEAP Elements for Which CIAP Funding Is Requested

Project funding would provide essential support and equipment for the initial nearshore ecosystem assessment program and contract services for baseline information. These elements are:

1. Nearshore habitat survey and stock density assessments This one-time SCUBA and ROV survey of the nearshore system will provide baseline information on habitat condition and stock density assessments of ecologically and economically important fish and invertebrate in rocky reef and kelp habitats.

2. SCUBA gear for Marine Region staff Department staff will participate in dive surveys of site sets.

3. ROV capability Marine Region has one existing ROV for that can be used for these surveys.

5. Enforcement Overtime Redirection of existing enforcement can be accomplished most effectively with additional funds for overtime. Enforcement of marine protected areas requires the ability to patrol and respond around the clock. In addition, on water patrol requires two officers for safety and effectiveness. In addition to cooperative enforcement efforts with other agencies, overtime funds will allow for extended patrol activity

6. Enforcement/survey vessels The Marine Region has enforcement and scientific vessels that can be used at some sites, and cooperating agencies and institutions will provide vessels at other sites.

Consistency with Mission and Goals

Mission: The intended result of the Nearshore Ecosystem Assessment Program (NEAP) is "comprehensive and coordinated management, conservation, and enhancement of California's" nearshore marine life resources "for their intrinsic value and for the benefit of current and future generations." That language, from the Ocean Agenda, is mirrored in the Department's mandate from the Marine Life Management Act (FGC Section 7050, etc.). The project is consistent with goals 1, 2, and 3.

Goal 1: Stewardship. The NEAP is planned to be the Marine Region's principal science tool for assessing, conserving, and managing the nearshore ecosystem along the entire California coast, beginning with the extraordinarily important and vulnerable rocky reef and kelp habitats. The system also represents a major first step away from single-species management and toward the more ecosystem-based approach mandated in FGC Section 7050.

Goal 2: Economic Sustainability. Managing fisheries for sustainability, as mandated by the Marine Life Management Act (FGC sections 7056 and 99.5), is complex even with adequate information on changing oceanographic conditions, fish and shellfish populations, fishing patterns, and markets for California's commercial fishing industry. In the nearshore environment, there is not adequate information, and there is evidence that fisheries for some species are not sustainable at recent levels of fishing effort. In the face of great uncertainty, management is constrained to be cautious to reduce the risk of long-term harm to marine life resources, and that conservative management has a great impact on recreational and commercial fishing. The NEAP is the cost effective means to provide much of the essential fishery information (FGC Section 93) needed to ensure the long-term viability of nearshore fisheries, the long-term health of the nearshore ecosystem, and long-term benefits to the non-consumptive uses of nearshore resources, including sport divers and coastal and ocean recreation and tourism.

Goal 3: Research, Education and Technology. The NEAP, particularly the use of existing no-take reference sites, will be an ecosystem-based approach to management science that is new in marine life management in California and has been applied to marine life management in few places in the world. The approach is more familiar in terrestrial environments, and the Marine Region has field tested the basic methodology at the Big Creek reserve on the Big Sur coast. The approach represents a significant advance in applying modern natural resource science to California's nearshore marine life resources. The NEAP offers an excellent opportunity for both the public and nearshore marine life resources to benefit from associated education and outreach programs and a volunteer research assistant program involving sport divers, fishermen, and others.

Timeline:

Fall 2001	Collaborative study design and development of methodologies; develop contracts for baseline habitat surveys and stock density assessments.

January-February 2002	Order SCUBA equipment.
March-July 2002	Final selection of NEAP references sites based on implementation of reserves through the Marine Life Protection Act.
August 2002 thru November 2003	Conduct coastwide nearshore baseline surveys of habitat and stock density assessments and analyze data.

Cost Estimate and Budget:

Contract	
Nearshore habitat survey and stock density assessments	$600,000
Overtime	
Enforcement Overtime	$50,000
Equipment	
Scuba gear for Marine Region Staff	$50,000
TOTAL	$700,000

Non-CIAP Resources:

DFG staff (various sources of funding)
- 4 Senior Marine Biologists (50%)
- 6 Associate Marine Biologist (50% to 100%)
- 8 Marine Biologists (100%)
- 12 permanent intermittent positions (100%)
- 1 GIS Specialist (80%)

DFG Vessels:
- 1 80' research vessel (Fish & Game Preservation Fund/Sportfish Restoration Act)
- 1 46' research vessel (FGPF)
- 4 18-24/" research vessels (various funding sources)
- 5 54' enforcement vessels (1 funded from FGPF, 4 from general fund monies)
- 3 24' rigid-hull enforcement/research vessels (2 funded by Monterey Bay Sanctuary; 3 funded by general fund)

Scientists, divers and office space provided by partners will account for some unknown level of additional support.

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Prepared by: Patricia Wolf, Regional Manager
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Title of project: Marine Life Protection Act Implementation
Project location: Monterey
Total cost: $372,000
Funding request: $372,000

MISSION

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Project Summary:

Purpose

The purpose of this project is to enable the Department of Fish and Game to meet the requirements of the Marine Life Protection Act (MLPA) by providing support for the Master Plan Team; facilitating public involvement in the development of recommendations for a preferred alternative network of Marine Protected Areas (MPAs); writing, producing and distributing the draft Master Plan; developing regulations for implementation of the plan; and coordinating integration of the resulting MPAs with ongoing fisheries management. The Department requires contract funds for scientific consultation, facilitation, support, meeting facilities, and map and document production.

Background and Problem Statement

The purpose of the Marine Life Protection Act (MLPA) is to improve the array of Marine Protected Areas (MPAs) in California waters through the development of a comprehensive Master Plan that will guide the adoption and implementation of the Marine Life Protection program established by the act. The goals of the MLPA are to help sustain, conserve and protect marine populations and ecosystems; to help rebuild depleted marine populations; to improve recreational, educational and study opportunities; and to ensure that California's MPAs have clearly defined objectives, effective management measures, adequate enforcement, and are based on sound scientific principles. To achieve these goals, the Department is required to conduct an evaluation of MPAs as a major tool for managing marine ecosystems and providing baseline protection for some fisheries. This includes a review of existing MPAs, recommendations for modifications to existing MPAs, and recommendations for a preferred alternative network of MPAs, including existing and newly proposed MPAs. These MPAs are to be designed and managed according to clear, conservation-based goals and guidelines that take full advantage of the multiple benefits that can be derived from marine reserves. The recommended MPA network will use a new classification system for MPAs established by the Marine Managed Areas Improvement Act.

A team of scientists and agency representatives are currently developing draft recommendations for reserves in four regions for California state waters. A series of public workshops is being planned for July and a second series of workshops with constituents representatives is planned for September to ensure public input on siting scenarios. The draft Master Plan is due to the Fish and Game Commission in January 2002, and a final plan is due to the Commission by April 2002. Adoption of the Master Plan will produce a need for regulations through the Commission. In addition, the MLPA requires the Department and Fish and Game to review all MPAs every three years and make management adjustments consistent with identified goals and objectives. Currently, the Department is meeting MLPA mandates with redirected positions and funds. Preparation of the Master Plan and implementation of the MLPA will require additional resources.

Marine reserves are rapidly gaining world-wide support as a tool to protect marine ecosystem biodiversity and to contribute to sustainable fisheries. A focused process to develop a recommendation for marine reserves around the Channel Islands is underway and expected to

be incorporated into the MLPA Master Plan. The Pacific Fishery Management Council has adopted marine reserves as a fishery management tool and will proceed with siting alternative for marine reserves for groundfish in federal waters. A national Marine Protected Area Center has been established in Santa Crus pursuant to the President's Executive Order that encourages the use of MPAs for marine resources protection and conservation and fisheries management. In addition, MPAs are being included in the Nearshore Fishery Management Plan currently in preparation by the Department.

Project Description:

Contract funds will be used to provide scientific consultation; professional facilitation of public and constituent meetings; support for the Master Plan Team and process for Master Plan development; and costs for Master Plan Team travel, meeting rooms, postage for public mailings, and printing of maps and documents.

Scientific Consultant: A full-time scientific consultant is needed to provide technical support to the Master Plan Team and attend monthly meetings; plan and coordinate statewide meetings with the public and meeting with constituent representatives; conduct data analyses for the Master Plan Team, including socioeconomic and environmental impacts of various alternatives; coordinate and prepare the Master Plan; confer with various state and federal agencies and other experts; conduct mass mailings to obtain and disseminate relevant information; develop regulations for the Commission to implement the Master Plan recommendations for a network of MPAs; coordinate the integration of MPAs with ongoing fisheries management; and prepare for periodic review of established MPAs. This consultant will require funds for travel; a computer capable of processing maps and spatial data; a vehicle; and office furniture.

Facilitation: Professional facilitation is needed to conduct a series of public meetings and a subsequent series of representative constituent meetings to provide for meaningful advice to the Master Plan and MPLA process by commercial and recreational fishermen, divers, scientists, local communities, other interested parties and the public. This will include developing an approach for representative constituent meetings, assisting with the establishment of small constituent groups in the planning regions, and training constituent groups in building consensus recommendations.

Support: Funds are needed for a part-time support position (retired annuitant, permanent intermittent, or contract position) to arrange for meeting rooms, assist with meetings, provide logistic support to the Master Plan Team and scientific consultant, prepare documents, process mailings, and respond to inquiries.

Other costs: Funds are needed for meeting rooms (about 10 public meetings are planned for the first series, and several small constituent group meetings are planned for the second step); postage and reproduction for public mailings; printing, publication and reproduction of reports and maps; and travel for the Master Plan Team for Team meetings and participation in public and constituent meetings.

Consistency with Mission and Goals:

Mission: Effective implementation of the MLPA will ensure comprehensive and coordinated development of marine protected areas (MPAs) in California waters. Under the guidance of the Master Plan, MPAs will be designed to conserve and enhance California's ocean and coastal resources for their intrinsic value, and to insure the persistence of healthy ecosystems for future generations, and to manage for sustainable fisheries.

Goal 1: Stewardship. MPAs help conserve ocean and coastal resources by maintaining ecosystem integrity and conserving biodiversity. They can provide insurance against uncertainty in marine management by protecting some resources from harvest. The MLPA requires broad public involvement in the development of siting alternatives, which will foster support for reserves and ocean stewardship.

Goal 2: Economic Sustainability: MPAs contribute to sustainable and economically beneficial fisheries by protecting habitat, enhancing spawning populations, increasing numbers and size of species inside reserves, and providing for spillover to fished areas.

Goal 3: Research, Education and Technology: MPAs advance research and education by providing areas for study that are not subject to harvest or use, which allows for a better understanding of the effects of environmental changes and the effects of fishing.

Timeline for Implementation:

NRDC is pursuing legislation to extend the timeline for implementation of the MLPA by approximately three to six months. If approved (which is expected), this would extend the deadline for the submittal of the draft Master Plan to the Commission and would allow additional time for development of MPA alternatives and public input. This would most likely affect the following timeline after the July public meetings by extending the timeline for second series of constituent meetings and other implementation steps three to six months.

May-June 2001	Small constituent group meetings on MPLA process
June 2001	Draft alternatives by Master Plan Team available for public review
July 2001	First series of about 10 facilitated public workshops along the coast.
August 2001	Master Plan Team revises network alternatives based on public input; scientific consultant analyses data. Facilitator plans second series of small group constituent meetings; develops groups, conducts training. Public mailings to disseminate information and solicit additional input.
September 2001	Second series of small constituent group meetings for review of network alternatives.

October-November 2001	Development of Draft Master Plan and preliminary draft regulations.
January 1, 2002	Draft Master Plan must be submitted to Fish and Game Commission (to meet this deadline, the plan will be submitted to the Commission at its December 2001 meeting).
January – March	Commission regulations developed. Commission hearings, additional public comment, and appropriate modifications to Master Plan 2002
January - March 2002	Commission regulations developed. Commission hearings, additional public comment, and appropriate modifications to Master Plan.
April 1, 2002	Submit Proposed Final Master Plan to Commission. Additional plan modifications and public input as required.
July 1, 2002	Commission adopts final Master Plan and a Marine Life Protection Program based on the plan. Commission submits Master Plan and program description to the Joint Committee on Fisheries and Aquaculture.
September 2002	Potential recommendations from Joint Committee on Master Plan submitted to Commission 60 days after receipt of report. Scientific consultant develops plans for periodic review of MPA
July 2002 -	Scientific consultant develops plans for periodic review of MPA July 2003 network; coordinates with other Department staff on integration of MPAs with ongoing fisheries management; coordinates with PFMC on reserve development and siting for groundfish plan.

Budget and Cost Estimates:

Scientific consultant Contract - 2 years (Base salary $65,000 per year, plus benefits and general expenses)	$190,000
Facilitation (for public meetings and constituent meetings, based on $170/hour, plus travel)	$55,000
Part time Staff Services Analyst - over 2 years (Based salary $48,000 per year, plus benefits and general expenses)	$40,000
Master Plan Team Travel	$12,000
Equipment (vehicle, computers, office furniture)	$39,000
Meeting Rooms	$20,000

Postage	$6,000
Printing and reproduction	$10,000
TOTAL	**$372,000**

Other Non-CIAP Funding

National Fish and Wildlife Foundation Funds for Scientific Consultant and Facilitation 2001-2002 FY	$70,000
DFG Contract management, staff support (part-time Senior Marine Biologist, Marine Biologist)	$35,000

CALIFORNIA RESOURCES AGENCY
COASTAL IMPACT ASSISTANCE PROGRAM
PROJECT PROPOSAL FORM

Department:	**California Coastal Commission, Monterey Bay National Marine Sanctuary (MBNMS)**
Prepared by:	**William J. Douros, Superintendent and Holly J. Price, Resource Protection Coordinator**
Phone number:	**(831) 647-4201**
Address:	**299 Foam Street Monterey, CA 93940**
E-mail:	**William.Douros@noaa.gov; Holly.Price@noaa.gov**
Title of project:	**Marine Resource Surveys Related to CalTrans/Highway 1**
Project location:	**Big Sur coast, within the MBNMS**
Total cost:	**$190,000**
Funding request:	**$150,000**

MISSION

To ensure comprehensive and coordinated management, conservation and enhancement of California's ocean and coastal resources for their intrinsic value and for the benefit of current and future generations.

GOALS: Four goals have been established by the State of California to achieve this mission.

Goal 1: Stewardship. To assess, conserve, and manage California's ocean and coastal resources and the ecosystem that supports those resources.

Goal 2: Economic Sustainability. To encourage environmentally sound, sustainable, and economically beneficial ocean and coastal resource development activities.

Goal 3: Research, Education and Technology. To advance research, educational programs, and technology developments to meet future needs and uses of coastal and ocean resources.

Goal 4: Jurisdiction and Ownership. To maximize California's interests in coastal watersheds, State Tidelands, the Territorial Sea, and the Exclusive Economic Zone.

Project Summary:

The Monterey Bay National Marine Sanctuary and the California Coastal Commission are working closely with the California Department of Transportation (CalTrans) to develop a Corridor Managment Plan along the Big Sur Coast, an important, nationally-recognized highway. Highway 1 in Big Sur is often subject to delays and closures due to storms, washouts, and rockslides, and its repair has generated controversy from business leaders, environmental groups, government agencies and local residents. The purpose of the Big Sur Coast Highway Management Plan (CHMP) is to develop sustainable strategies that ensure the safe and efficient operation of the highway while protecting the unique qualities and sensitive terrestrial and marine resources of this remarkable coastline.

CalTrans has received a grant to develop most of the management plan, however it lacks adequate funds for an essential component of the plan – a survey of marine resources along typical landslide areas and sites where CalTrans may seek to dispose of rock and soil debris onto the shoreline and into the ocean. Highway management and repair strategies, even with objectives to minimize earthwork impacts and overall disturbances, will continue to require suitable locations for depositing excess material. The handling of material at a landslide site or exporting to a suitable disposal site continues to raise concern about the potential for impacts to shoreline habitats. Evaluating shoreline habitats for sensitivity to these activities will be an essential component to determining the effects of landslide material being deposited or redistributed on or near the shoreline.

This proposal, if funded, would allow the Sanctuary, in collaboration with the Coastal Commission and Caltrans, to survey the intertidal, nearshore subtidal and sea bird and marine mammal haulout areas along the Big Sur coast. The survey would focus on those areas of coastline known or with the greatest potential to be affected by highway repairs from landslides or other storm-related events. In some places, limited data exists and would be utilized, but in other places new field work would be conducted. Data collected will include species lists, population densities, and presence of economically important, particularly sensitive and/or endangered species. The results would be produced in multiple GIS-data layers and maps for resource managers and the public. Critical, valuable areas could then be avoided in the future, and areas with low resource value that may be suitable for ocean disposal could be identified. The Sanctuary and the Coastal Commission will almost certainly be called upon to allow ocean disposal of rock and soil by CalTrans in the future, and without this essential marine resource survey, decisions would be made in a vacuum of information.

The scope of work to be conducted under this proposal is outlined below. Work would be conducted at existing active slide regions, including areas with chronic slides and areas with potential problems, and other areas where Caltrans is most likely to make disposal requests, drawing on Caltrans, State Department of Mines and Geology, and USGS to identify existing and likely future slide locations. Work would also be conducted in representative key culvert areas which are associated with slides. At the various sites, sampling would be conducted over two seasons during a one year period.

1. Identify, gather, review and synthesize existing biological monitoring, substrate analyses and nearshore physical oceanographic information and research studies in the project area.
2. Identify and summarize gaps and information needs.
3. Outline criteria for selecting specific sites for shoreline assessment, based on identified data needs and Caltrans likely disposal needs.
4. Characterize and map geological substrate types at selected sites according to 5-10 categories, such as granite, boulder, sand, etc.,
5. Identify and map physical factors at selected sites which may affect the sensitivity of marine biota to disposal activities, such as wave energy, relative exposure and aspect, presence of protective offshore rocks, etc., and qualitatively rank each site by physical exposure categories which could affect disposed material.
6. Within each category of representative substrate and exposure types, utilize existing limited information and new transects to characterize and map biological assemblages and patterns at selected sites in the intertidal and subtidal zones, noting abundance and diversity of algae and invertebrates. Identify and note the abundance of those species which may be particularly susceptible to disposal activities, such as the sea palm, owl limpet, etc. Field work would be conducted at low tide and from boats with SCUBA diving to survey nearshore subtidal habitats like kelp forests.
7. Characterize and map haulout sites for marine mammals and seabird nesting areas.
8. Identify and map rare and endangered species and associated habitats.
9. Rank critical and/or disposal-sensitive habitat using indices such as location, size, and quality in order of most critical to least critical; consider species and assemblages' degree of tolerance to sediment disposal and physical factors. Display rankings on maps and in matrix form.
10. Provide marine biological site characterization in GIS format (ArcInfo/ArcView) to aid regional decision-making both in advance of and after individual slides, and make information accessible to agency partners in the Coast Highway Management Plan process.

Wherever possible, data collected under this proposal will also be coordinated and pooled with data collected at other Big Sur locations under the Sanctuary's separate proposal to CIAP to update the oil spill sensitivity maps throughout the Sanctuary region.

This project related to coastal landslides and highway repair efforts is linked to countless other resource management agencies – in addition to the Coastal Commission and the Sanctuary who need this information, the National Marine Fisheries Service, Fish and Wildlife Service, Forest Service, Army Corps of Engineers, the State Regional Water Quality Control Board, California Department of Fish and Game, State Parks and Recreation and County of Monterey will benefit from and rely upon this data. Moreover, the current funding for the Big Sur CHMP is also supporting technical work being performed by the US Geological Survey and UC Santa Cruz to assess landslide deposition. Staff time and ancillary support from both the Coastal Commission, Sanctuary, and Caltrans is currently extensive in evaluating disposal options, overseeing studies, and analyzing results, and this existing staff time and coordination will be continued to oversee the marine biological assessment proposed here.

Consistency with Mission and Goals of CIAP:

This project coordinates closely with nearly a half dozen of the State of California's largest and highest profile state agencies. As noted above, this project has at its heart extensive collaboration and partnerships involving local, State and federal agencies, local businesses and environmental groups, and is part of a much larger comprehensive highway management plan. It involves the ensured preservation of its most spectacular coastline – Big Sur, –its most popular and internationally-recognized roadway – Highway 1, and a nationally treasured ocean habitat, the Monterey Bay Sanctuary. This project will meet the CIAP's overall mission and Goals 1, 2 and 3, by ensuring conservation and proper management of the coastal ecosystem that Highway 1 bisects along the Big Sur coastline. It will allow for proper research as to the resources and specific habitats most at risk from regular landslides and state road repair strategies. It will contribute to economic sustainability by helping agencies identify environmentally sound material disposal locations and activities so that the highway can remain open for the many businesses and residents which rely on its use. It will also ensure, by identifying the most prudent road repair and disposal strategies, that the environment, which is critical to all Big Sur area and Monterey area tourist businesses, will not be adversely affected by road repair and material disposal decisions made without adequate information on biological impacts.

Timeline:

Evaluation of existing data: 3 months

Planning and conducting field surveys over two seasons: 1 year

Data analysis, mapping and project report: 6 months

Total time: 18 months

Budget:

Contracts for literature review, boat time, field work, data analysis, GIS mapping, report preparation, etc.	$175,000
Travel for field team and consultants	$5,000
Equipment and supplies	$8,000
Phone, copying, etc.	$2,000
Total project budget:	$190,000

Direct Sanctuary matching funds to cover portions of bird/mammal surveys and staff time contributed from Sanctuary, CCC and Caltrans to coordinate and oversee project	$40,000
Total requested from CIAP funds:	**$150,000**

CALIFORNIA RESOURCES AGENCY
COASTAL IMPACT ASSISTANCE PROGRAM
PROJECT PROPOSAL FORM

Department: Department of Fish and Game
Prepared by: Patricia Wolf, Regional Manager
Phone number: (562) 342-7108
Address: 4665 Lampson Avenue, Suite C
Los Alamitos, CA 90720
E-mail: pwolf@dfg.ca.gov

Title of project Market Squid Research
Project location: La Jolla/San Diego
Total cost: $75,000
Funding request: $75,000

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Project Summary:

Purpose

The purpose of this project is to complete research necessary for managing California's market squid fishery. Additional research would be accomplished to develop and evaluate an escapement model for squid management. Collections of non-spawning squid, that are not available from the fishery, are necessary. Additional population modeling is required to evaluate this management approach using existing information about squid biology, population dynamics, and fishery behavior.

Background and Problem Statement

Over the last decade, the market squid fishery has grown into the State's most valuable fishery and accounts for the highest volume of landings. In the 1999-2000 season, squid landings totaled 125,000 tons (the highest on record) and about $30 million in ex-vessel value to fishermen.

However, little is known about key aspects of squid biology that are important for insuring that overfishing is avoided, ecosystem needs are addressed and the productivity of the fishery is maintained. To address these needs, the Legislature established in 1998 a moratorium on squid permits, a $2,500 fee for squid permits to fund research and management development, two advisory committees to assist the Department in squid management, and a requirement for a report to the Legislature on management recommendations by April 1, 2001. The Department has developed a fishery sampling program and a squid aging program, conducted fishery independent surveys to assess spawning habitat and squid distribution, and established contracts with universities on squid reproduction, population modeling, genetic stock structure, early life information, and egg deposition and hatching. The Fish and Game Commission has adopted interim regulations establishing weekend closures to provide uninterrupted spawning and regulations requiring shields and reduced wattage for squid lights to minimize interactions with seabirds. In consultation with the Squid Fishery Advisory Committee and the Squid Research Scientific Committee, and after several public meetings, the Department has prepared a report on management recommendations, including a restricted access program, for the squid fishery that will be presented to the Legislature as required. Beginning in April, 2001 the squid permit fee will be reduced to $400, which will not cover ongoing management costs, and cannot fund additional research.

This period of squid research and management development has occurred during a period of large changes in environmental conditions, including a major El Nino event. Squid are short-lived (less than a year), highly responsive to environmental conditions, and vary widely in availability and possible abundance. As a result of this variability, squid were largely unavailable to the fishery and researchers during a major portion of the study period. In addition, traditional fishery management models, such as biomass assessments and quotas, are generally not applicable to squid and alternative approaches are being explored and developed. Although major accomplishments have been made in the improvement of our understanding of squid biology and management needs, additional research is required to fully develop a sound management approach. Because additional research is needed, current management recommendations do not include a formal management strategy and instead

focus on keeping the fishery at current levels until this management approach can be completed.

Recent findings have estimated the potential and realized fecundity (number of eggs as an estimate of reproductive capacity) of the squid stock and the fecundity of squid in the commercial catch. Recent research has also identify escapement fecundity as a new and promising method for monitoring and managing squid. In this management approach, the fecundity of squid in the catch would be routinely estimated using measurements made by biologists sampling the catch. The Department would be able to adjust fishing effort to ensure that escapement meets the target. Additional biological information, together with population modeling and analysis, is needed to develop and test an escapement model to establish an appropriate escapement target and determine if it will be effective for managing squid in a sustainable manner.

Project description

This research will be accomplished through a one-year interagency contract with the National Marine Fisheries Service and UC San Diego. It will be a cooperative project using Department of Fish and Game staff and research vessels, primarily to collect non-spawning squid from trawl surveys to complete fecundity estimates. Together with existing information from squid in the catch, additional analysis and monitoring would be done to improve precision and evaluate the method for potential bias. The first part of the effort will be focused on field collections and sample processing. The second part of the contract will be focused on data analysis, modeling, and evaluation of management for escapement.

Consistency with Mission and Goals:

Mission: This research will enable the Department to fully develop an effective, longterm comprehensive management approach for market squid that is based on sound science and can ensure conservation of the important squid resource for the future.

Goal 1: Stewardship. A fully developed management strategy will allow the Department to manage squid effectively. Squid are an important forage species, and effective management will ensure that ecosystem needs are addressed.

Goal 2: Economic Sustainability: Under current management, which lacks a science-based management model, the fishery will likely be capped at a recent high level to account for uncertainty about the status of the squid population and protect against overfishing. A fully developed management approach, such as an escapement model, would allow the fishery to operate at an optimal level.

Goal 3: Research, Education and Technology. This is a research proposal that will advance our understanding of squid biology and implications for the most effective management approach to ensure sustainability of the squid resource and fishery.

Timeline:

Fall 2001	Develop contract specifications for developing squid escapement model.
December - April 2002	Conduct field collections and laboratory processing of samples.
May - Oct 2002	Develop modeling approach and evaluate spawning escapement management approach for squid.

Cost Estimate:

Contract	$75,000

Non-CIAP Funds:

DFG staff will participate on the cruises and DFG vessels will be used to support the field collections. Funds from squid permit fees may be available, depending on the outcome of pending legislation that may affect and increase permit fees.